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REMARKS

Applicants thank the Examiner for the attention accorded the present Application in the December 22, 2005 Non-Final Office Action, in which claims 1-24 were pending. By the foregoing amendments, claims 2, 4, 8-9, 12 and 19-20 have been cancelled; claims 1, 3, 7, 10, 14 and 17 have been amended to more clearly specify the present invention; claims 22-24 have been withdrawn as being drawn to a non-elected invention, and new claims 25-33 have been added. No new matter has been added, and the amendments are fully supported throughout the specification, as more fully described below.

Claims 1, 3, 5-7, 10-11, 13-18, 21 and 25-33 are now currently pending in this Application. Based on the above amendments, Applicants respectfully submit that the rejections to these claims have been overcome. Reconsideration of this Application, and allowance of claims 1, 3, 5-7, 10-11, 13-18, 21 and 25-33, is respectfully requested in view of the foregoing amendments and the following remarks.

Restriction requirement

The Examiner required Applicants to elect either the claims of Group I (claims 1-21, drawn to a method of cleaning a part) or Group II (claims 22-24, drawn to a part) for examination purposes. Applicants hereby confirm their election to prosecute the claims of Group I (claims 1-21), without traverse.

Title

Please change the title of this application to "Methods of Removing Foreign Material from a Cavity".

35 USC § 112, first paragraph rejections

Claims 1-5, 7-12 and 12-20 stand rejected under 35 U.S.C. § 112, first paragraph as being unenabled. Applicants respectfully draw the Examiner's attention to paragraph [0025], where it is stated that: "*Although described with specific reference to a turbine blade, the methods described herein have applicability with any part having an internal cavity that may contain foreign material F. These parts could be other parts of the*

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engine 10, such as turbine vanes, or parts unrelated to gas turbine engines." Applicants submit that one skilled in the art would understand how this invention could be utilized for any part having a cavity and an opening. As such, this specification does enable a person skilled in the art to make the invention commensurate in scope with the original claims. Therefore, no claim amendments have been made to overcome this rejection.

Based on the above arguments, Applicants respectfully submit that claims 1-5, 7-12 and 12-20 are enabled. Thus, Applicants respectfully request that the Examiner withdraw this rejection and allow pending claims 1-5, 7-12 and 12-20.

35 U.S.C. § 102(b) & § 103(a) rejections

Claims 1, 5-7, 10 and 13 stand rejected under 35 U.S.C. §102(b) as being anticipated by Beeck. Claims 2-4, 8-9, 11-12 and 14-21 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Beeck in view of Buongiorno. Applicants respectfully disagree with the Examiner's conclusion and submit that the present invention is not anticipated by, not obvious in view of, nor even suggested by, Beeck and/or Buongiorno.

A. Independent Claims 1 and 7

As presently claimed in Applicant's independent claims 1 and 7, Applicant's invention comprises: (a) locating said foreign material within said cavity; and then (b) creating an additional opening in said part at a location adjacent/proximate said located foreign material. The amendments to these claims are supported by Applicant's original claims 2, 9, 17 and 19, and at paragraph [0028], where it is noted that: "... the additional opening 48 could have any suitable position on the turbine blade 22. The position of the additional opening 48 could be selected relative to the location of the foreign material F and to the specific techniques used in later method steps. Generally speaking, one suitable location for the additional opening 48 is radially outboard of the foreign material F and as close to the foreign material F as possible."

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In contrast, neither Beeck nor Buongiorno disclose locating an additional opening in a part proximate the located foreign material after the foreign material has been located, as currently claimed by Applicants.

Beeck only discloses utilizing an inspection aperture that is actually cast into the part when the part is made, not one that is created and located proximate some foreign material inside the part after the foreign material has been located.¹

Buongiorno only discloses locating a hole in a location that “provides access into the cavity of the component where the deposits are accumulated. If a suitable hole is not available through the component designed air passages to access the deposits, a hole is drilled into the cavity.”² Buongiorno never mentions locating the hole proximate the located foreign material after the foreign material has been located, but merely discloses locating the hole somewhere in the cavity where the foreign material is located, which may or may not be proximate the located foreign material. Furthermore, Buongiorno never even mentions that it might be desirable to locate the foreign material first, before creating a new hole in the component.

Therefore, neither Beeck nor Buongiorno anticipate, disclose, nor even suggest, the invention currently recited in independent claims 1 and 7 of Applicant’s invention.

B. Independent Claim 14

As presently claimed in Applicant’s independent claim 14, Applicant’s invention comprises: (a) locating said foreign material within said cavity via at least one of: x-ray; neutron radiography; ultrasound; and thermal imaging; and then (b) creating an additional opening in said part. The amendments to this claim are supported by Applicant’s original claim 4 and at paragraph [0026], where it is noted that: “the technician could use x-ray, neutron radiography, ultrasound and thermal imaging to locate the foreign material F.”

In contrast, neither Beeck nor Buongiorno disclose utilizing x-ray, neutron radiography, ultrasound and/or thermal imaging to locate foreign material in a cavity before creating an additional opening in the part, as currently claimed by Applicants in claim 14.

¹ Beeck, paragraph [0010].

² Buongiorno, col. 2, lines 1-5.

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Beeck never even mentions x-ray, neutron radiography, ultrasound or thermal imaging.

Buongiorno never mentions neutron radiography, ultrasound or thermal imaging. Buongiorno mentions using x-ray, but only for inspecting the cavity after it has been cleaned to insure that the deposits have been removed.³ Buongiorno never mentions using x-ray to locate foreign material before deciding where to locate an additional opening in the part. Furthermore, Buongiorno never even mentions that it might be desirable to locate the foreign material first, before creating an additional opening in the part.

Therefore, neither Beeck nor Buongiorno anticipate, disclose, nor even suggest, the invention currently recited in independent claim 14 of Applicant's invention.

Based on the above arguments, Applicants respectfully submit that independent claims 1, 7 and 14 of the present invention are patentably distinguished from Beeck and/or Buongiorno. As claims 3, 5-6, 25-28 depend from claim 1; and claims 10-11, 13, 29-31 depend from claim 7; and claims 15-18, 21, 32-33 depend from claim 14; the discussion above applies to these claims as well. Further, these claims each include separate novel features. Thus, Applicants respectfully request that the Examiner withdraw these rejections and allow pending claims 1, 3, 5-7, 10-11, 13-18, 21 and 25-33.

CONCLUSION

Applicant respectfully submits that the amendments to the claims, together with the arguments presented above, successfully traverse the rejections given by the Examiner in the Office Action. For the above reasons, it is respectfully submitted that the pending claims patentably distinguish the present invention from the cited reference. Allowance of pending claims 1, 3, 5-7, 10-11, 13-18, 21 and 25-33 is therefore respectfully requested.

As seven (7) claims were cancelled and three (3) claims were withdrawn, and only nine (9) new claims were added, Applicants believe that there are no additional claim fees due at this time. As this response is being timely filed within six (6) months of

³ Buongiorno, col. 2, lines 58-60.

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the mailing date of the Non-Final Office Action dated 12/22/05, Applicants believe that the only fees due are \$1020 for a three (3) month extension of time. The Commissioner is authorized to charge this amount and any additional fees that may be due, or credit any overpayment, to Deposit Account Number 21-0279, Order No. EH-10942.

Should the Examiner have any questions, or determine that any further action is necessary to place this Application into better form for allowance, the Examiner is encouraged to telephone the undersigned representative at the number listed below.

Respectfully submitted,

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